

**Changing self in the digital age:  
The impact of digital technology on the self and person.\***

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This paper examines the impact of computers and digital technology on the contemporary self. It begins with an overview of William James' (1890/1950) self theory and examines the impact of digital technology on the spiritual, social, material selves along with challenges to the "I" or ego.

### **Historical Context: The importance of Self**

Self-understanding and self-theory have been around since the dawn of civilization, something that has been well documented since 1500 BC in India (Paranjpe, 1998) and over the centuries in Western philosophy (Taylor, 1989). Paranjpe (1998) provides a comparative history of both affirmations and denials of self in Indian and European philosophy and psychology, while also identifying the distinction between self and personhood. In modern times, the model of self according to William James (1890/1950) offers a foundation from which contemporary development in self theory can be examined (Hermans & Hermans-Konopka, 2010).

James' (1890/1950) model has two primary components, the subjective "I", or stream of consciousness, and the objective "Me", which in turn, has three principal components that are experienced by the "I" through self-feelings (emotions) and actions of self-preservation. The "Me" is comprised of the material, the social, and the spiritual selves, where James states:

*a man's Self is the sum total of all that he CAN call his, not only his body and his psychic powers, but his clothes and his house, his wife and children, his ancestors and friends, his reputation and works, his lands and horses, and yacht and bank account (1890/1950, p. 291, italics original).*

The *Material Self* is made of one's body and one's sense of being physically embodied and attached to material possessions like one's clothes, house, lands,

animals, tools and technology. The *Spiritual Self* entails one's thoughts and "inner subjective being .... a reflective process" (p. 296) that exists dialectically with a "felt" acquaintance of ownership of one's thoughts, ideas, and imaginations.

Arguably the most complex constituent of the self for James, the *Social Self* is not merely grounded in one's conscious experience, but also manifest in the surrounding social communities with whom one participates. He states that: "*A man's Social Self* is the recognition which he gets from his mates" (p. 293, italics original) where we have "an innate propensity to get ourselves noticed, and noticed favorably, by our kind." (p. 293). As such, the Social Self is also multifaceted, where: "[p]roperly speaking, *a man has as many social selves as there are individuals who recognize him* and carry an image of him in their mind. To wound any one of these his images is to wound him" (p. 294). Additionally, James states that "we may practically say that he has as many different social selves as there are distinct *groups* of persons about whose opinion he cares" (p. 294, italics original). Thus the social self is in the recognitions one receives from others as well as the shared perspectives, attitudes, and 'common sense' that we have with others.

Moral evaluation is also part of the social self for James where he states that "[a] man's *fame*, good or bad, and his *honor* or dishonor, are names for one of his social selves." p. 294, italics original). While James was writing in the late modern period of the 1890s, the self can also be examined with respect to the development of an "electronic" self in our post-modern times (Tonks & Bhatt, 2016).

## **The impact of computers on self**

Young (2012) cites Charles Taylor's (1989) notion of "The punctual self" that is drawn from Locke's reflective and disengaged, a self that is found in the act of self-examination. She describes how technology in many forms has fostered this, such as the use of diaries, calendars, clocks and computers that enable the development of a "mirror" of self, one that is also described by Turkle (1984; 1995; 2011).

### ***The spiritual / psychological self***

Clearly the most prolific scholar on the impact of computers on our sense of self is Sherry Turkle (1984) who begins analysing human computer interactions in the emergence of a "Second Self". She describes the initial impact of computers through gaming and programming, providing a developmental analysis of the stages of metaphysics, mastery, and identity formation to describe how children and adolescents respond to computers. Young children, she contends, interact with computers in a metaphysical manner, acting as though the machines are alive. Older children come to take mastery over computers through learning to program and interact with them, eventually to come to develop their identity (Erikson, 1968) by "thinking through" the machines and gaining self-understanding by having their identity objectified in the machines. In this pre-internet analysis, Turkle (1984) also describes the emergence of computer "cultures" and the decentering of the self as people come to think of themselves as computers with multiple sub-processes.

A decade later Turkle (1995) provides a deeper account of the impact of computers on human self-understanding with the development of the internet and

advances in artificial intelligence, by showing “how a nascent culture of simulation is affecting our ideas about minds, body, self, and machine” (p. 10). She describes how people create new personae in their online games and other multi-user domains, being able to alter one’s attributes, including their gender. She draws from post-structuralist psychoanalysts showing how “the self is multiple, fluid, and constituted in *interaction* with machine connections” (p. 17, italics added) whereby the unitary self of everyday requirements for responsibility (as a person) has become an illusion. Turkle (1995) argues that computers provide a grounding of the “post-modern aesthetic” in everyday life, giving rise to a “protean self” that is non-linear, opaque, multiple, fractured, and shifting from context to context (Lifton, 1993). She raises the possibility that this state could fall to the extreme of Multiple Personality Disorder (MPD) but may be recentralized as in Jung’s model of self as a complex of archetypes. Here, in describing this multiplicity of self, Turkle (1995) suggests that a core identity is still possible, something like having a “home page” with hyper-links to other facets of self.

Turning toward a narrative digital self, Tredennick (2008) identifies “the self as reflexively understood by the person in terms of his or her own biography” (p.52), one that has a continuity through constant reconstruction, “a negotiation between our past and our present” (p. 52). Vitanova (2010) further describes the development of textual narratives of self as a “dialogical self”, where self is socially co-constructed through the play of language and communication games. Today, the self and identity are being socially constructed through online play, while traditionally they were constructed through physical play (Erikson, 1950, 1968). It now stands that with an accelerated

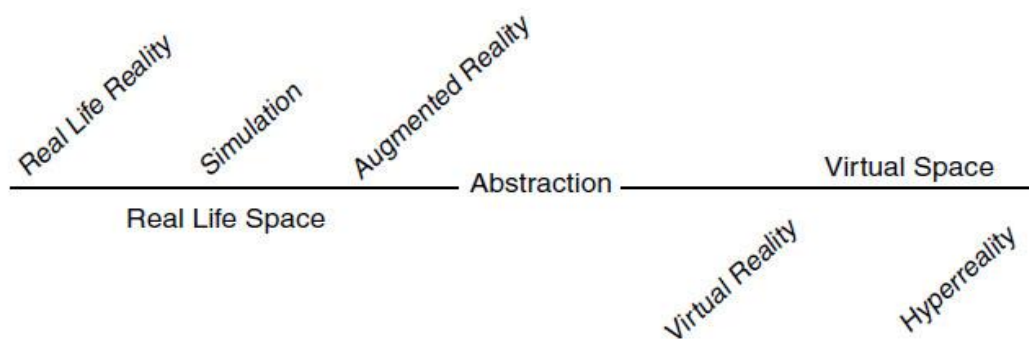
number of players interacting with each and every self, there is a proliferation of multiple identities being socially constructed for each self.

### ***The Social Self***

Following James' (1890/1950) dual-featured social self, we can examine the impact of digital technology on both the recognitions and reputations that others have of one's self as well as the shared attitudes and opinions of virtual social communities (Tonks & Bhatt, 2016). With the development of social media over the past decade people have come to "friend" or accept others as followers; evaluate and be evaluated through "likes" or "loves" or by being trolled, blocked, or defriended. According to Turkle (1984; 1995; 2011) the transition from bulletin boards and chat rooms and to social media has provided a means through which to judge others and be judged by others. People are judged by their electronic selves in terms of what they post to their profiles showing what they think, how they look, and at what locations they are visiting. Lyon (2018) identifies a transition from gaming to surveillance that has occurred over the past decade that is built upon our "scophillia" (p. 122) or "love of being seen" which has led to a boundary blurring and shifting from private to public life. We have developed a performative and confessional self that is "both the triumph and betrayal of privacy" (p.130). Turkle (2011) also identifies the online confessional self that is subject to trolling, stalking, and "creeping"; while Rosenfeld (2015) discusses Goffman's (1959) presentational self where we have become online actors and voyeurs, subjects and objects on display. Lyon (2018) addresses the pressure to disclose and become a fully transparent self, as seen in contemporary narratives such as the book *The Circle* and Netflix programs like *Black Mirror*.

These aspects of interest and concern over the judgment of others is grounded in the emerging post-modern culture associated with the proliferation of digital technology. Turkle (1995) identifies the growth of a *culture of simulation* that begins with television media and consumer culture as seen in visiting shopping malls and Disneyland; while now *interactive computers* provide a simulation of life and the possibility for re-writing one's self and identity in myriad ways. In her ethnographic interviews, Turkle (2011) identifies that people have come to prefer intimacy at a distance through simulated experiences and relationships, even though this gives rise to feelings of isolation and abandonment, and disruptions to traditional social relations and constructions of self (Waters, 2019).

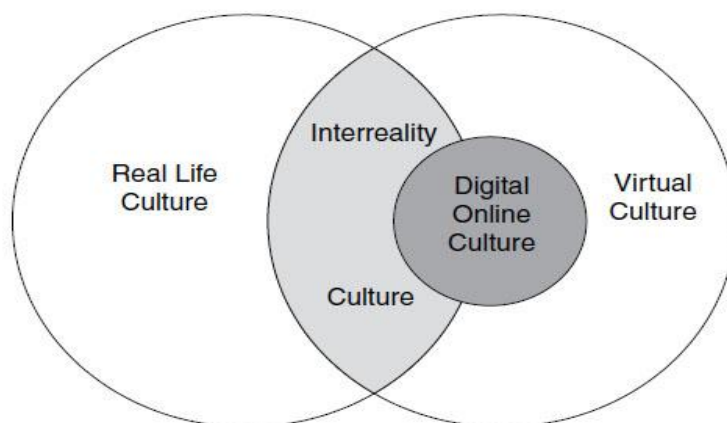
Rosenfeld (2015) provides a more detailed analysis of the relationship between Real Life and Virtual Life, with a spectrum from Real Life Reality to Simulated Reality, Augmented Reality, Virtual Reality and Hyper Reality (see Fig 1.1) .



**Figure 1.1** Early twenty-first-century realities.

Going beyond Turkle's SR, Rosenfeld identifies the emergence of Augmented Reality (AR), Virtual Reality (VR) and Hyper Reality (HR) taking human consciousness and identity into blending Real Life Reality (RLR) with technology through 3D models

and holograms to full immersion in computer generated realities and identifying with them as in the Matrix or Avatar. She also describes the cultural worlds found between Real Life (RLR) and Virtual Life Reality (VLR), where Digital Online Culture (DOC) forms a part of the Interreality Culture (IC) that exists between Real Life Culture (RLC) and Virtual Culture (VC).



**Figure 1.2** Cultural intersections.

As seen in figure 1.2, Digital Online Culture (DOC) refers to acting and communicating online while Interreality Culture (IC) represents all areas of interface between Real Life Culture RLC and VC. Rosenfeld's (2015) framework provides a good delineation of the specific components and their interactions found in the complex relationship between Real Life (RL) and Virtual Life (VL).

Willson (2006) also examines virtual communities and provides a philosophical examination of the ontological categories of knowledge, space & time, and embodiment that are foundational to communities and how they are structured and experienced.



Following the communitarian approach of Charles Taylor (1991a), she highlights the importance of social norms, values, and attitudes in the bonding, commonality, and reciprocity involved in identity development within communities. Willson (2006) further outlines three types of communities based upon the historical periods of the Traditional, the Modern and the Post-Modern. The *Traditional* is grounded in place and history, where identity is unchosen and embodied in face-to-face relations. The *Modern* shows a shift with choice often coming through migration where one can have a multiplicity of community identities that are grounded a sense of time and space that is mediated through institutional forms and is organized around more extended communicative relations. The *Post-Modern* involves extended choice and flexibility of identity, free from the embodied or a geographic location and mediated through technology and abstract integrative practices, making it primarily disembodied and dislocated. She states that “[t]ime becomes experienced as immediate and compressed, multiple and fragmented, yet easily accessible and traversable” (Willson, 2006, p. 39). Citing Marshall McLuhan, Willson identifies a technological shift to “visual space [which] enables detachment and objectivity, while acoustic space is involved and subjective” (2006, p. 72). Lyon (2018) further states that “[n]ew technologies enable not only speed but *acceleration*, which in makes mobility a basic feature of life changing the relationship between space and time” (p. 167, italic added). This is also echoed by Young (2012) who describes the technological creation of a hyper-connected and remote social world as one that dislocates time and space.

Tredennick (2008) further shows that digital information cultures are built around textuality, where through websites, blogs, email, and messaging we have a culture

based on narratives of self and identity. He reports that we are influenced by digital communities and cultural industries that give rise to the development of *mythologies* and *narratives of personal experience*, revealing our human values and how technology widens the “public space” for discourse on values and moral action. Boesch (1991) refers to these as mythemes that guide identity and cultural development.

Agger (2004) offers neo-Marxist account of the impact of computers on self and society, largely providing a critical appraisal of the capitalism of the internet as a cultural industry that promotes consumerism and “self-production” through the creation and promotion of consumer “needs” for commercial and political manipulation. Edward Snowden (2019) warns us about the wrongful use of *surveillance* where corporations and governments are collecting “*Big Data*” and engaging in data analytics to control consumers, to control voters, and to control citizens.

Lyon (2018) describes how digital technology has given rise to a *culture of surveillance* through the processes of performance, compliance and normalization. Building upon Charles Taylor’s (2004; 2007) notion of “social imaginaries” or “moral orders”, Lyon shows how we have come to develop “*surveillance imaginaries*”, or expectations about surveillance and how and why we live with it. Beginning with the fun and play of gaming and the later introduction of fear from “911” there has been a proliferation of surveillance where today it is all too familiar in the forms of everyday and ordinary surveillance (ie loyalty cards, security cameras & social media). Lyon states that “to engage with surveillance culture is to ask about hearts and minds, everyday attitudes and actions, as well as to analyse technologies, profits or policies” (2018, p.173).

### ***The Material Self***

While in many ways the impact of computers on the self has led to a “disembodiment” and dislocation of self, it is also apparent that our material selves have been altered in three principal manners. First, digital technology has had an impact on our physical bodies, secondly, we have begun to engage in “cyborging” through wearable technologies and bionics, and lastly, we have changed our relationship with Real Life (RL) material others in our relationships with devices, robots, and the internet of things.

Turkle (2011) identifies the disembodiment of self where people report even wanting to avoid talking on phone, which is seen as revealing too much information or being too intrusive, rather preferring the more distant and controlled “social” interaction of texting or using social media. Young (2012) says that people need to use digital technology critically and consciously otherwise “surrendering ourselves to a disembodied distracted self” (p. 5). Miller (2012) refers to this as a *crisis of presence* based upon a metaphysical stance of being-in-the-world promoted by on-line living, something that Dreyfus (2001) identifies as a threat to our primordial embodied “grip on the world”.

### ***Impact on our bodies***

Turkle (2011) describes the rise of anxiety due to being “always on” or connected to digital technology and from being under scrutiny or surveillance. Others have shown various impacts on our bodies, mental and physical health, such as a rise in anxiety and depression due to social media use (Elhai, Hall & Erwin, 2018). While

Young (2012) cites Linda Stone's description of "Email Apnea", others describe the impact on sleep interruption (Twenge & Campbell, 2019) and that night time use of cell phones gives rise to excess body weight, poorer diet quality, and lower physical activity (Chahal, Fung, Kuhle & Veugelers, 2012). Waters (2019) describes the impact of cellphone use on stress and attentional deficits while Young (2012) quotes McLuhan who states that "[w]e have to numb our central nervous system when it is extended and exposed, or we will die. Thus the age of anxiety and electric media is also the age of the unconscious and of apathy" (p. 84). We have yet to observe the impact on health from binge watching, although it has been studied as addictive behavior (Alter, 2017; Riddle, Peebles, Davis, Xu & Schroeder, 2018).

How we interact with the material world has also been impacted, where Turkle (2011) describes today's youth as "growing up tethered" to their parents through their phones. There has been an explosion of the use of technology to acquire goods and services, such as selecting restaurants or using *SkipTheDishes*, flights and hotels with *Expedia* or *AirBnB*, navigating with google maps, getting home with *Uber*, or doing all of one's shopping at *Amazon*. Many people today no longer collect physical CDs but rather download music from *iTunes* or listen to it streaming through *Spotify*. These mark a shift away from attachment to material goods, although contemporary hipster culture has led to a comeback of collecting vinyl records.

### ***Cyborging: Quantifying the self***

Turkle (1995) examines the proliferation of "mind altering" biofeedback devices such as goggles, headphones, and helmets, that have since become commonplace in the form of "wearables". Young (2012) provides a thorough account of the development

of the *virtual self* through the use of wearables and the self-tracking (*quantified self*) movement. In particular through the development of ready-to-hand mobile technologies, many people have moved towards a data-driven life as sensors have gotten smaller and better and people regularly carry around computers (phones) to share their experiences on social media. As such people can easily track their behaviour and bodily attributes, mood and mind states, health and wellness, or athletic performances (Young, 2012). These technologies have also been used to monitor diabetes (Katz, Mesfin & Barr, 2012) and have been used for clinical diagnosis and gamified treatment of depression and anxiety (Arean & Cuijpers, 2018).

Not only has self-tracking been done to enhance health and wellness, for many people self-tracking has led to the creation of a “digital doppelganger”, an online double that at times has become an obsession, as seen in the online publication of the *Felton Annual Report*, a complete digital record of all everyday events in the life of Nicolas Felton (Young, 2012). Rosenfeld (2015) further identifies nano-technology as giving rise to the possibility of the emergence of *transhumanism*, human-body-electronic melding (cyborging) or even *posthumanism* with the emergence of new cyborg species.

Young (2012) also points out that aggregate data from a variety of people is also used to create data maps to track disease-spread, crime-rates, or consumer habits. This development of “Big Data” and data analytics can be used by individuals to enhance their own lived experience, or by corporations and governments to control and manipulate consumers or citizens. Young reports that “data exhaust” or digital traces of online or RL activity has considerable marketable and surveillance potential.

### ***Material others in Real Life (RL)***

Turkle (1984) shows how through early home computer kits, and the development of programming and hacking, individuals came to “make the computer their own”, stylized and tailored to their own needs. She further discusses the attachment or feelings people have for the electronic medium as part of the “holding power” of *interactive devices* to grab our attention and direct our actions (Turkle, 1995). Waters (2019) reports on the strength of attachment that people have for their cell phones and, while we see this trend of attachment to such material possessions, the consumerist culture of today is one of disposal and acquisition of the latest devices with newest features and capabilities. Adam Alter (2017) has also identified the intentional development of addiction to technology through the behavioural principles of: (1) compelling goals just beyond reach, (2) unpredictable positive feedback, (3) incremental progress, (4) unresolved tensions, and (5) strong social connections. This often makes use of the gamification of tasks through social media and wearable technologies, making them “irresistible”.

Turkle (2011) further describes the intimacy that we seek through and with our devices as involving some *projection* and *transference* of our needs and wishes onto them. She shows this through reports of people’s experience with robotic pets, robotic assistants, robotic nurses and even robotic sexual partners. She provides many cases of when robotic pets become non-functional, their owners will refuse to reset them to “start over” but would rather leave them for dead, often having robot funerals.

Turkle (2011) identifies the “creation of a thou” in robots that raises the question of authenticity of human relationships with robots along with the question of consciousness, blurring the boundaries between creator and created, programmer and programmed. Similarly, Lyon (2018) draws from Levinas in examining *alterity* in dealing with the internet of things, including smart phones, smart televisions, smart streets and smart cities. Willson (2006) also examines the “I-thou” of inter-subjectivity within virtual communities along with identity and authenticity.

### **The person in the stream**

This paper has examined the “Me”, as impacted by computers, and will now consider the manner in which the “I”, the ego, or the person has been impacted. James’ (1890/1950) subjective self, or “I” as stream of consciousness, is comprised of the characteristics of: (1) being personal, (2) constantly changing, and having a (3) continuity of experience with (4) intentionality and (5) choice. When examining our relationships with electronic devices and digital technology with respect to James’ “I”, we can consider the issues of: personhood, ethics, control, and power over persons.

Paranjpe (1998) identifies the basis of personhood in the *trilogy of mind* as involving cognition, conation and affect. He points out that rights and responsibilities are granted to persons recognized in the eyes of the law. Here, like with James, personhood is tied to an embodied consciousness that has the capacity to think clearly, to have appropriate emotional responses, and to make volitional choices.

Turkle (2011) provides numerous examples of where consciousness is perceived to exist within digital technology. With the development of robots and artificial

intelligence, she contends that we are forced to contemplate not only our own personhood, but also that of our devices. As described above, Turkle (1984) states that a decentering revolution has occurred in terms of the impact of computers on how we think of ourselves, similar to that of psychoanalysis, yet she states that neo-Freudians rescued the ego back from decentering and that it remains unclear what will happen with the computer's attack on "I". Turkle (1995) looks to Robert Jay Lifton (1993) for solutions, where we could: (1) return to traditional dogmatic unity, (2) turn to religious fundamentalism, or (3) embrace the fragmented self. This is the route for Hermans and Hermans-Konopka (2010) who posit that the post-modern self is no longer the unitary self of William James, but rather a dialogical self represented by multiple "I"-positions. Vitanova (2010) identifies the social construction and interpretation of multiple narratives of the dialogical self as: (1) "I-for-myself"; (2) "I-for-the-other"; (3) "the-other-for-me". Self-awareness is thus developed in part through "the eyes of the other" as one creates narratives of self through interaction with others. Lyon (2018) identifies visibility as the basis of recognition, "looking into the eyes of the other" (p. 178), as central to the formation of personhood, something that has been altered by digital technology, particularly by social media. According to Miller (2012) online life diminishes face-to-face *presence* which is central to the recognition of, and ethical responsibility towards, others. With this fracturing and multiplication of the "I" there is a blow to personhood where the ascription and recognition of rights and responsibilities to the person is obfuscated with no singular agent to be held ethically and legally responsible (Lyon, 2018).



Turkle (2011) additionally identifies the question of aliveness and the prospect of “the *singularity*” unfolding. Should AI or robots acquire the capacities of cognition, conation, and affect, they may be considered persons. Likewise, with the development of digital doppelgangers, personal doubles existing digitally; what is their place in the world of ethics and personhood? This raises the issue of the authenticity of which is the real person, the one to be recognized, given rights, and held responsible.

Wilson (2006) identifies Charles Taylor’s (1991a) “*ethic of authenticity*” along with the ideology of autonomy as being central to the moral orders of many contemporary communities. Here, authenticity of the person is in part understood through one’s participation in a community, how one is recognized and acts reciprocally. Lyon (2018) identifies recognition and responsibility as central to the management of persons in the emerging surveillance imaginaries; for recognizing specific persons and applying their rights or not recognizing them and withdrawing their rights (Taylor, 1994). While acknowledging the traditional forms of surveillance by governments and police forces for establishing control over persons, Lyon (2018) states that we are now in a time of *liquid surveillance* that is “beyond big brother” where ordinary people are involved in surveillance on themselves and the people around them. This occurs through three types of real time data: (1) active self-tracking; (2) passive self-tracking through devices; and (3) data capture through the internet of things. Active self-tracking may take the form of user generated data through social media or wearable technology, while passive self-tracking may occur through “digital exhaust” left through the use of “leaky apps” and loyalty cards. Data capture from the internet of things may involve tracking through smart televisions, smart electricity meters, smart appliances or smart cars and smart

cities. Lyon (2018) draws attention to the “the Big Five” corporations of Apple, Google, Microsoft, Amazon, and Facebook as being the largest sources of surveillance, corporations engaged in *social sorting* and seeking control through data analytics for the purpose of profits and control. In light of this grab for power through surveillance, Lyon states that “personhood is crucially important and needs to be asserted and struggled for at every level” (2018, p. 179).

Willson also raises the issue of control and power over persons where she states that “knowledge and information enhances the potential for control and thus increased efficiencies” (2006, p. 79). Calling on Charles Taylor’s (1991b) malaises of modernity she identifies the rise of individualism, the primacy of instrumental reason, and diminished community political participation as being fostered by contemporary digital living. Foucault’s (1977) work on Jeremy Bentham’s *Panopticon* prison is cited by many of these scholars as a description of our present state of people engaging in surveillance on themselves and each other (Turkle, 2011; Young, 2012; Lyon, 2018). Jonathan Zittrain (2008) has become a leading data activist, one who calls on everyone to become data activists, in particular to stand up *against proprietary interests* and *for net neutrality* and *a generative and open internet*. Likewise, Young (2012) raises issues over data ownership and calls for data portability where data is owner-controlled, much like what occurs with ethical standards for scientific research. Lyon (2018) additionally calls for data activism in the pursuit of fairness and justice for persons to become digital citizens, taking responsibility and making claims for their rights of control over their digital data. He suggests four possible ways forward: (1) for individuals to develop their own Privacy Enhancing Technologies (PETs), (2) enhanced governmental regulation,

(3) the mobilization of action groups (i.e., civil liberties), and (4) engagement in open discussion of surveillance imaginaries and practices along with an ethical seriousness to examine the use of data exhaust. In doing so we need to notice the wider contexts of small scale experiences of surveillance and how emerging surveillance imaginaries and practices relate to *actual* ethical and political responsibilities; knowing that the attitudes and actions of users make a difference! Rosenfeld (2015) reminds us that the internet has promoted both hegemonic and anti-hegemonic forces and that *education* must play a crucial role in teaching critical understanding and best uses of technology.

### **Summary**

The impact of computers and interactive digital technology on James' model of self has been shown for the features of the "Me" and the "I". It has been identified that the spiritual self and identity have become decentred and dislocated in time and space, arguably fragmented and multiple. Through the development of online gaming and social media the social self continues to seek recognition from others, but in a *magnified and accelerated* fashion where many people show a preference for virtual relationships and communities over traditional Real Life interaction and participation. A cultural shift has been identified towards one of simulation and surveillance. This shift is evident not only in the lived experiences of persons, but also in the narratives of self and identity in contemporary literature, film, and television. While in many ways the self has become disembodied, there also appear to be transformations of the material self in terms of physical bodies, interaction with the material world and material others, as well as the development of digital doubles through self-tracking and the *measurement and manipulation* of human lives. While much of these activities are for the promotion of

better health and wellness, there has been a corresponding loss of control and a fracturing of the status of the person through the rise of surveillance capitalism and the loss of personal rights. Whether the growth of digital technology will destroy the person in the future or whether persons will become digital activists engaged in the politics and power-wielding of today to emancipate the person of tomorrow yet remains to be seen.

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